

22 Documents

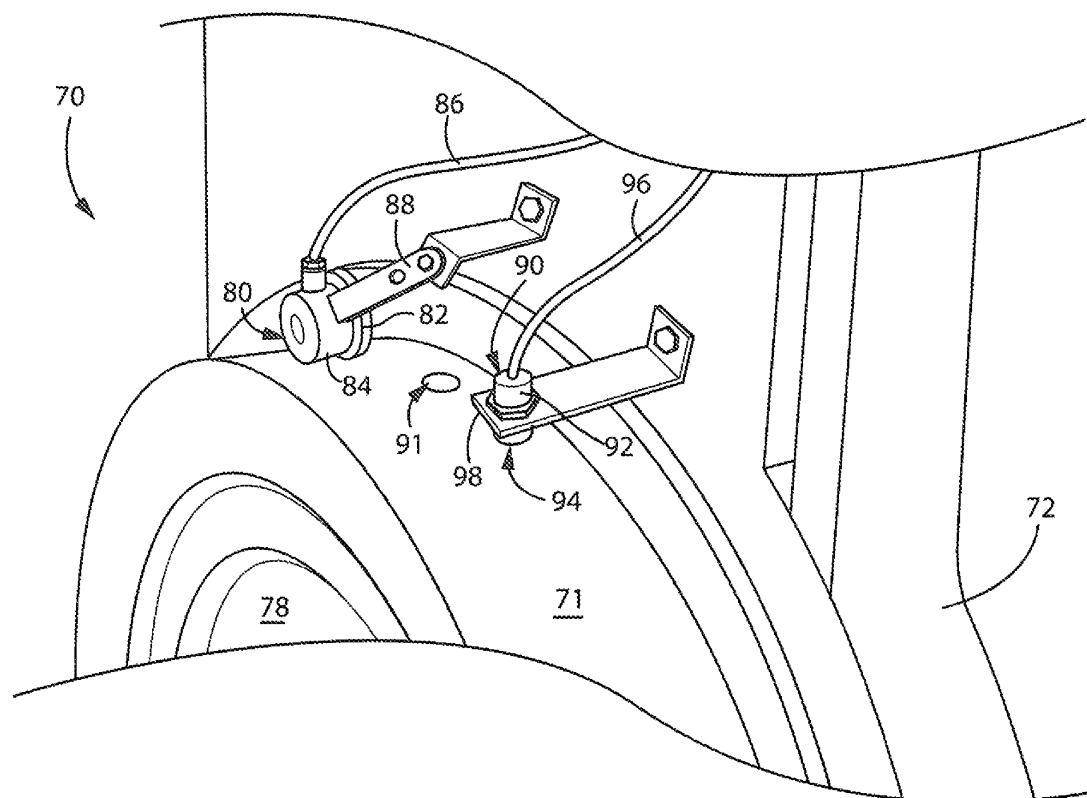
Publication numbers	Title	Current assignees
EP2824825 A2	Method and apparatus for determining position for a permanent magnet elevator motor	MAGNETEK
EP2990369 A1	Method and arrangement for determining elevator data based on the position of an elevator cabin	INVENTIO
EP2206672 A2	Method for monitoring the expansion of a lift shaft	K A SCHMERSAL
CN103253574 A	Elevator car speed and position monitoring system	GUANGZHOU ROPEN TECHNOLOGY DEVELOPMENT
CN103253576 A	Elevator car speed monitoring system	GUANGZHOU ROPEN TECHNOLOGY DEVELOPMENT
CN1237532 A	Position controlling apparatus and method	LG INDUSTRIAL SYSTEMS
KR19990075980 A	Elevator position controlling apparatus and method	LG OTIS ELEVATOR
JP09188479 A	Position control method for elevator	LG OTIS ELEVATOR
JP08133616 A	Elevator position control method and device therefor	OTIS ELEVATOR, ...
EP2923986 A1	A method and apparatus for automatic elevator drive configuration	KONE
CN1246435 A	Velocity instruction generation apparatus for car of elevator system and velocity control method thereof	LG OTIS ELEVATOR
CA2072240 A1	Elevator horizontal suspensions and controls	OTIS ELEVATOR
US20030000777 A1	Elevator auditing and maintenance	OTIS ELEVATOR
CN103538982 A	Elevator monitoring device	SUZHOU DEAO ELEVATOR
CN103693521 A	Intelligent elevator accident long-distance emergency three-in-one unit and control method	TIANJIN AMJOY TECHNOLOGY
WO2012143988 A1	Position measuring apparatus	MITSUBISHI ELECTRIC
CN102344060 A	Elevator	TOSHIBA ELEVATOR
JP09012245 A	Elevator position detection device	HITACHI, ...
JP08053274 A	Position inspection device for balance weight	MITSUBISHI ELECTRIC
JP2003048680 A	Elevator auditing with recommended action, reason and severity in maintenance messages	OTIS ELEVATOR
FI200800387 A0	Determination of the movement of a synchronous machine	KONE
EP-905080 A2	Rail survey unit	OTIS ELEVATOR

Family 1/22 - FAMPAT - ©Questel

Title

(EP2824825)

Method and apparatus for determining position for a permanent magnet elevator motor

Images**Publication data including kind & date**

EP2824825	A2	2015-01-14	EP2824825
CA2916036	A1	2015-01-15	CA2916036
US2015015170	A1	2015-01-15	US20150015170
WO2015006283	A2	2015-01-15	WO201506283
US9093937	B2	2015-07-28	US9093937
EP2824825	A3	2015-09-23	EP2824825
WO2015006283	A3	2015-10-29	WO201506283
HK1206153	A1	2015-12-31	HK1206153
BR112016000265	A1	2016-01-19	BR112016000265
AU2014287474	A1	2016-01-21	AU2014287474
SG11201510801S	A	2016-01-28	SG11201510801S
CN105409109	A	2016-03-16	CN105409109
PH12015502817	A1	2016-03-21	PH12015502817
IN11713/DELNP/2015	A	2016-05-13	IN2015DN11713
MX2015017998	A	2016-09-07	MX2015017998
ZA201509362	B	2017-04-26	ZA201509362
AU2014287474	B2	2017-04-27	AU2014287474
BR112016000265	A2	2017-07-25	BR112016000265



[NZ715328](#)

A 2017-08-25 NZ-715328

[CA2916036](#)

C 2017-08-29 CA2916036

**Abstract**

(EP2824825)

A system for determining the angular position of a synchronous motor includes an **encoder** with a friction wheel engaging a rotating surface of the motor. The friction wheel is spun by the rotation of the motor, and the **encoder** generates a signal corresponding to the angular position of the friction wheel. An independent sensor is provided to generate a pulse once per revolution of the motor. The independent sensor detects the presence of a target on the rotating surface of the motor and generates the pulse when the target is proximate to the sensor. A controller receives the signal corresponding to the angular position of the friction wheel as well as the pulse generated by the independent sensor to determine the angular position of the motor. The controller compensates the angular position of the motor each time the pulse is generated, correcting accumulated position error.

Inventors

BACKMAN JOHN

ANDERSON GARRY

Latest standardized assignees - inventors removed

MAGNETEK

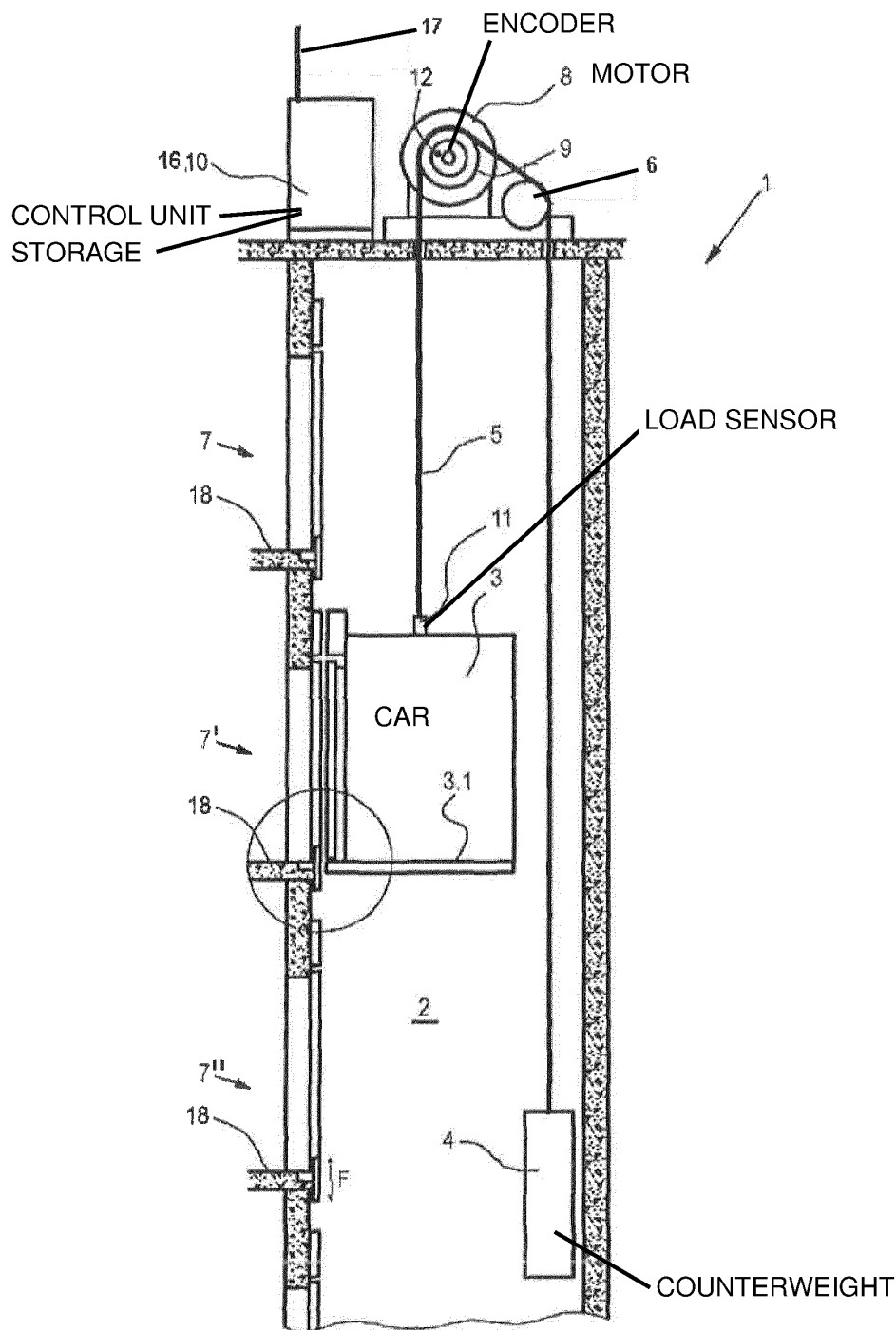
Family 2/22 - FAMPAT - ©Questel

Title

(EP3186182)

Method and arrangement for determining elevator data based on the position of an elevator cabin

Images



Publication data including kind & date

EP2990369	A1	2016-03-02	EP2990369
CA2956175	A1	2016-03-03	CA2956175
WO2016030487	A1	2016-03-03	WO2016030487
CN106573752	A	2017-04-19	CN106573752
EP3186182	A1	2017-07-05	EP3186182
US2017253461	A1	2017-09-07	US20170253461



Abstract

(EP3186182)

A method and an arrangement for determining elevator data based on the position of an elevator cabin (3) of an elevator system (1), wherein the elevator cabin (3) has a flag reading sensor (15), is movably arranged in a hoistway (2) and can be moved by a drive (8) over a traction sheave (9) and at least one suspension means (5) an can be stopped at a plurality of stopping positions (18) of the hoistway (2), each stopping position (18) having a flag marker (13) with a flag height (F), and

wherein movement of the elevator cabin (3) is determined by a control unit (10) connected to an **encoder** (12).When leaving a stopping position, the travelled distance (D) of the elevator cabin (3) between the stopping position and a flag edge (14) is measured and a stopping inaccuracy (I) is determined by the control unit (10).

Inventors

VILLA VALERIO

Latest standardized assignees - inventors removed

INVENTIO

Family 3/22 - FAMPAT - ©Questel

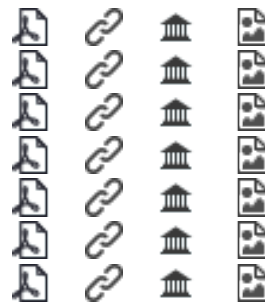
Title

(EP2511218)

Method for monitoring the expansion of a lift shaft

Images**Publication data including kind & date**

EP2206672	A2	2010-07-14	EP2206672
EP2206672	A3	2010-11-10	EP2206672
EP2511218	A2	2012-10-17	EP2511218
EP2511218	A3	2012-12-26	EP2511218
EP2206672	B1	2013-06-26	EP2206672
EP2511218	B1	2014-05-14	EP2511218
ES2475865	T3	2014-07-11	ES2475865

**Abstract**

(EP2511218)

The method involves comparing position signals and/or speed signals generated by sensor systems e.g. incremental **encoder** (28) and absolute value **encoder** (30), with predetermined reference values.A target value of a regularly operated lift controller (16) is detected corresponding to a position and speed of a lift car (12) by a channel (46).Determined actual value corresponding to the position and the speed of the car is detected by another channel (48).An extension of a lift shaft is monitored and compensated by positioning correction marks.The position signals are selected from position actual value and position target value.

Inventors

ADAMS FRIEDRICH

RÜHL THOMAS

NIEHAUS MICHAEL

STRATMANN CHRISTOPH

Latest standardized assignees - inventors removed

K A SCHMERSAL

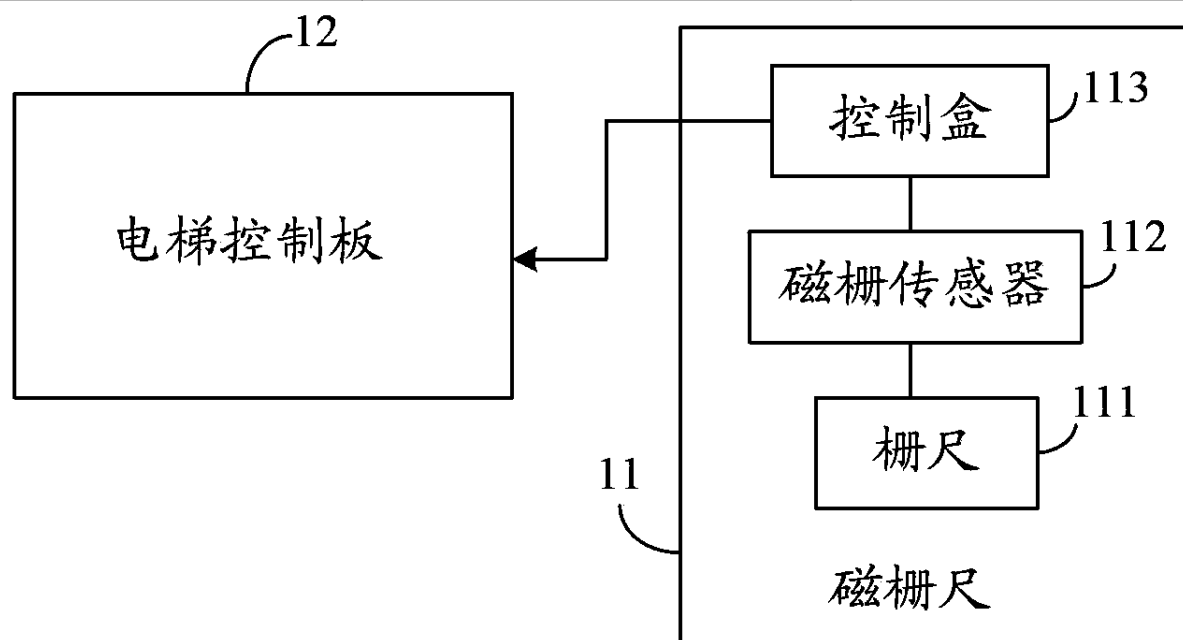
Family 4/22 - FAMPAT - ©Questel

Title

(CN103253574)

Elevator car speed and position monitoring system

Images

**Publication data including kind & date**

CN103253574	A	2013-08-21	CN103253574
CN103253574	B	2016-03-23	CN103253574B

**Abstract**

(CN103253574B)

The invention provides an elevator car speed and position monitoring system. The elevator car speed and position monitoring system comprises an elevator control board. The elevator car speed and position monitoring system further comprises a magnetic grid ruler. The magnetic grid ruler comprises a grid ruler, a magnetic grid sensor and a control box. The grid ruler of the magnetic grid ruler is vertically hung in an elevator well from the top portion of the well. The magnetic grid sensor is fixed on the outer wall of an elevator car, connected to the elevator control board through the control box and used for sending a collected first speed value of the elevator car and a collected first position value of the elevator car to the elevator control board through the control box. The elevator control board is used for receiving the first speed value and the first position value and conducting speed and position monitoring on the elevator car according to the first speed value and the first position value. The elevator car speed and position monitoring system can accurately detect the actual speed and a current position of the elevator car, and is very high in safety and reliability.

Inventors

HUANG LIMING
 LIU ZHEN
 ZHONG ZHAOFENG
 XIAO SHU
 QIN PENG
 LEI JIAWEI
 WANG PENG
 SU BOYUAN

Latest standardized assignees - inventors removed

GUANGZHOU ROPEN TECHNOLOGY DEVELOPMENT

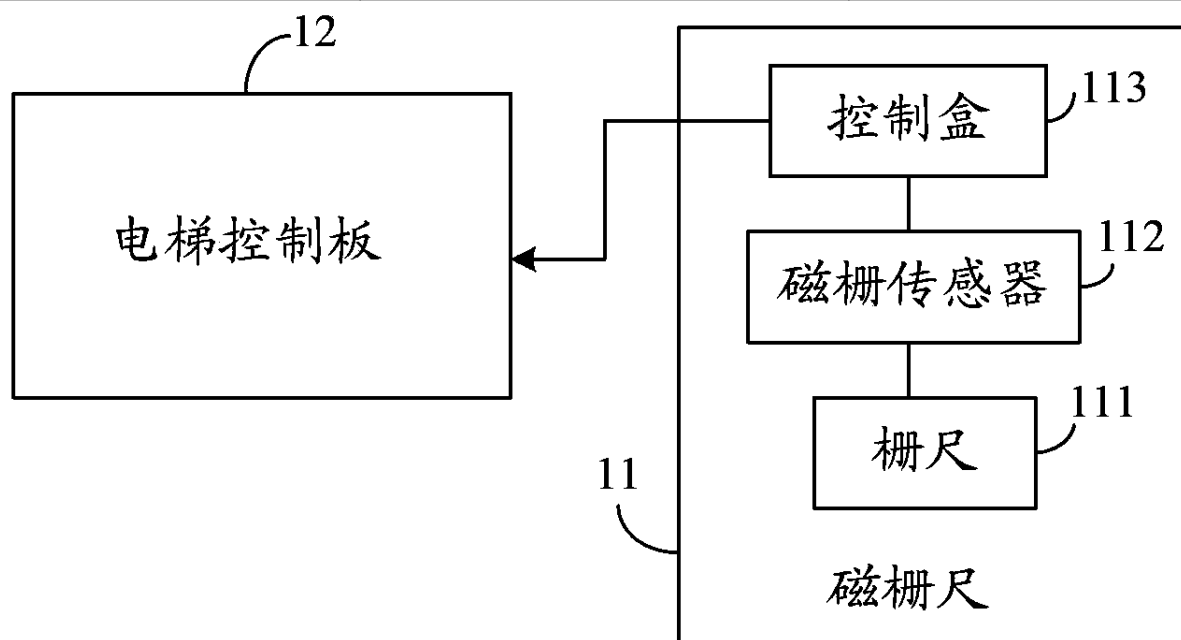
Family 5/22 - FAMPAT - ©Questel

Title

(CN103253576)

Elevator car speed monitoring system

Images

**Publication data including kind & date**

CN103253576	A	2013-08-21	CN103253576
CN103253576	B	2016-04-20	CN103253576B

**Abstract**

(CN103253576B)

The invention provides an elevator car speed monitoring system. The elevator car speed monitoring system comprises an elevator control board. The elevator car speed monitoring system further comprises a magnetic grid ruler. The magnetic grid ruler comprises a grid ruler, a magnetic grid sensor and a control box. The grid ruler of the magnetic grid ruler is vertically hung in an elevator well from the top portion of the well. The magnetic grid sensor is fixed on the outer wall of an elevator car, connected to the elevator control board through the control box and used for sending a collected first speed value of the elevator car to the elevator control board through the control box. The elevator control board is used for receiving the first speed value and conducting speed monitoring on the elevator car according to the first speed value. The elevator car speed monitoring system can accurately detect the actual speed of the elevator car, and is very high in safety and reliability.

Inventors

GUO JINGHU

LIU ZHEN

ZHONG ZHAOFENG

XIAO SHU

QIN PENG

LEI JIAWEI

WANG PENG

SU BOYUAN

Latest standardized assignees - inventors removed

GUANGZHOU ROPEN TECHNOLOGY DEVELOPMENT

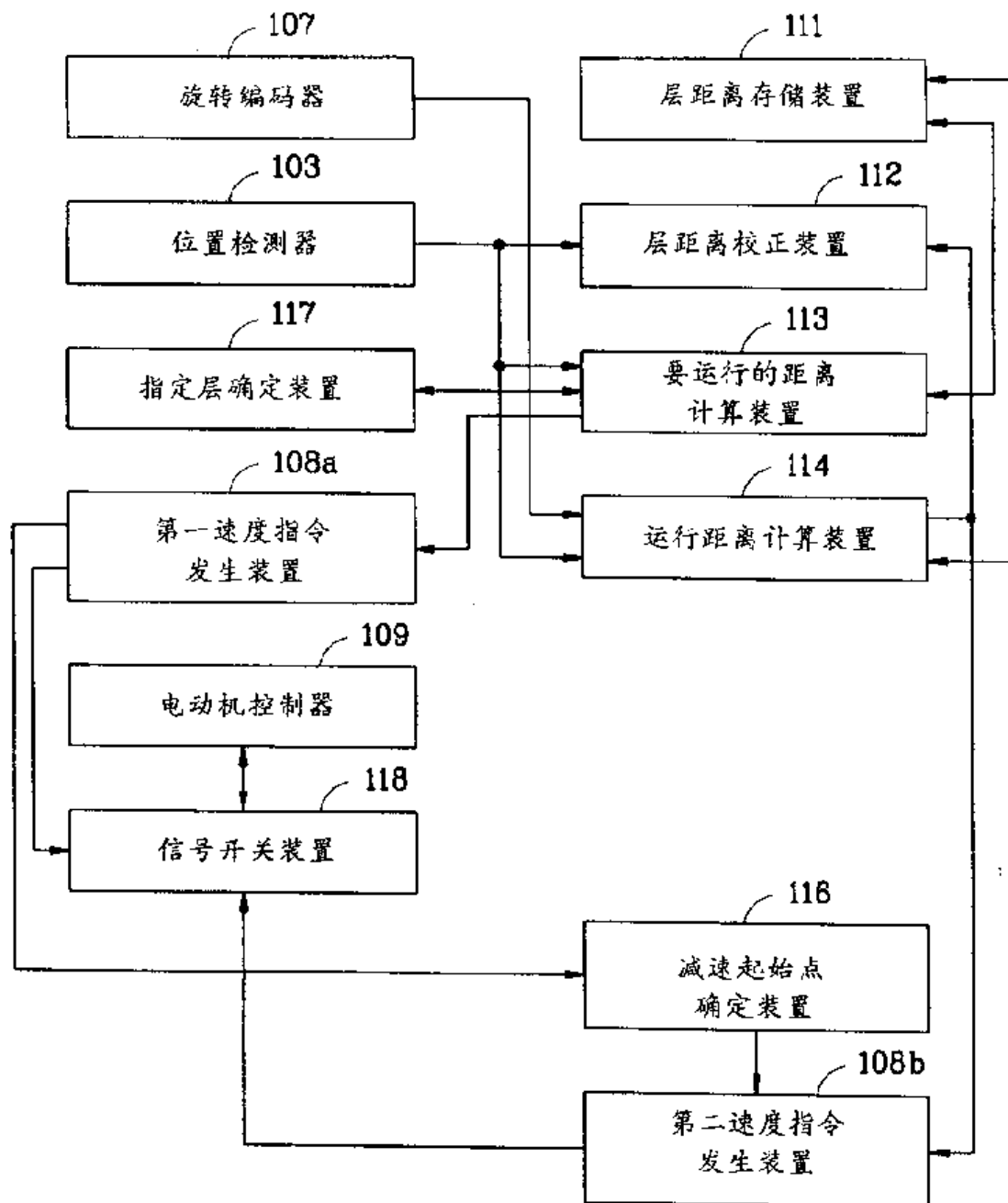
Family 6/22 - FAMPAT - ©Questel

Title

(CN1083390C)

Position controlling apparatus and method

Images



Publication data including kind & date

CN1237532	A	1999-12-08	CN1237532
KR20000000953	U	2000-01-15	KR20000000953U
CN1083390	C	2002-04-24	CN1083390C



Abstract

(CN1083390C)

In a position controlling apparatus and method for an elevator which controls a position of an elevator in accordance with a velocity command profile consisting of an acceleration region, a uniform velocity region and a deceleration region, a position controlling apparatus and method according to the present invention controls generation of a synchronization position error in the deceleration region. The position controlling method for the elevator of the invention includes the steps of: determining a deceleration starting point of a deceleration profile region; previously storing a command position corresponding to the time elapsed after the deceleration starting point; dividing the command position into a plurality of position regions; differently establishing computing formulas of a velocity command by each position region; determining the position region to which the command position at a present time belongs; computing a second velocity command value in accordance with a time using the computing formula corresponding to the determined position region at the present time;

and controlling a position of the elevator car in accordance with the second velocity command value after the deceleration starting point.

Inventors

SOO-CHEOL LEE

Latest standardized assignees - inventors removed

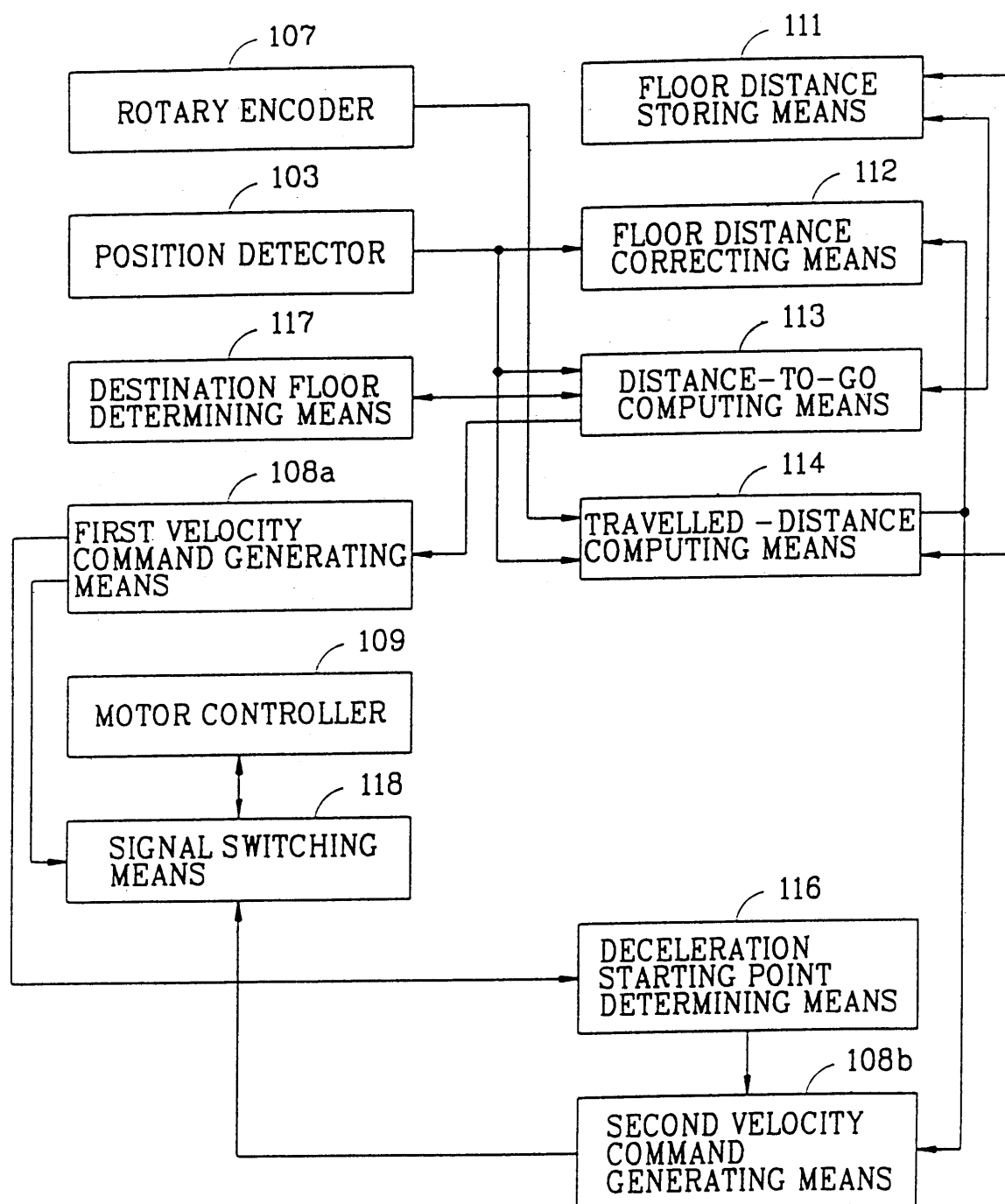
LG INDUSTRIAL SYSTEMS

Family 7/22 - FAMPAT - ©Questel

Title

(US6202796)

Elevator position controlling apparatus and method

Images

KR100259511	B1	2000-07-01	KR100259511
US6202796	B1	2001-03-20	US6202796
TW595616	U	2004-06-21	TW-595616U

**Abstract**

(US6202796)

In a position controlling apparatus and method for an elevator which controls a position of an elevator in accordance with a velocity command profile consisting of an acceleration region, a uniform velocity region and a deceleration region, a position controlling apparatus and method according to the present invention controls generation of a synchronization position error in the deceleration region. The position controlling method for the elevator of the invention includes the steps of: determining a deceleration starting point of a deceleration profile region; previously storing a command position corresponding to the time elapsed after the deceleration starting point; dividing the command position into a plurality of position regions; differently establishing computing formulas of a velocity command by each position region; determining the position region to which the command position at a present time belongs; computing a second velocity command value in accordance with a time using the computing formula corresponding to the determined position region at the present time; and controlling a position of the elevator car in accordance with the second velocity command value after the deceleration starting point.

Inventors

LEE SOO-CHEOL

Latest standardized assignees - inventors removed

LG OTIS ELEVATOR

Family 8/22 - FAMPAT - ©Questel

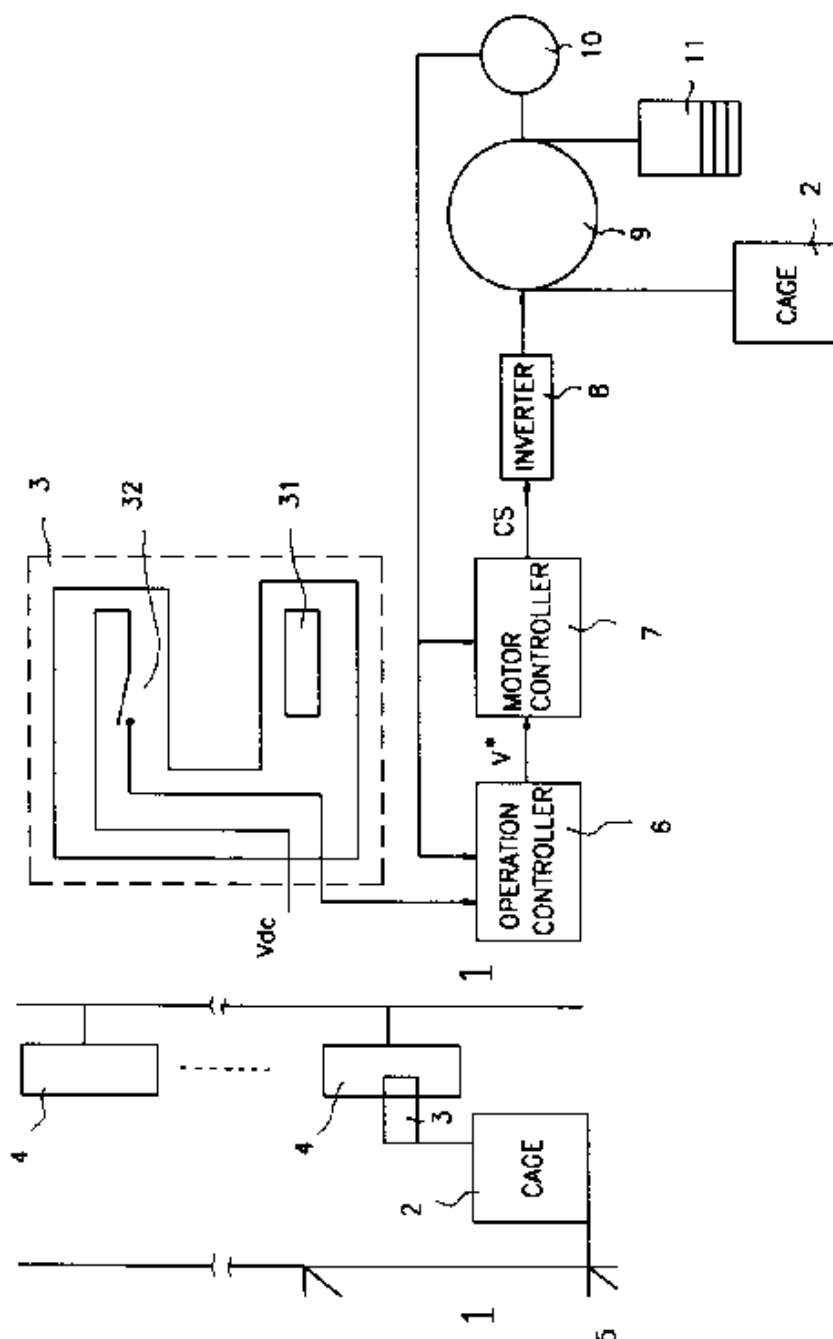
Title

(US5896950)

Position control method for elevator

Images

FIG. 1
CONVENTIONAL ART



Publication data including kind & date

JPH09188479	A	1997-07-22	JP09188479
KR19970042201	A	1997-07-24	KR19970042201
CN1158818	A	1997-09-10	CN1158818
BR9605766	A	1998-08-25	BR9605766
KR0186122	B1	1999-04-15	KR100186122
US5896950	A	1999-04-27	US5896950
SG67963	A1	1999-10-19	SG--67963
CN1075036	C	2001-11-21	CN1075036C
BRPI9605766	A1	2006-09-26	BR199605766



Abstract

(US5896950)

An improved position control method for an elevator by which the system does not receive any overload even when the speed pattern of the cage is changed while the cage is operated in accordance with the position error occurred. The method includes the steps of a first step for computing a running distance to a service floor when a passenger registers a call, generating a speed pattern in accordance with the distance computed, and operating a cage in accordance with the speed pattern, a second step for re-computing the running distance of the cage based on a position difference error when the position difference error occurs during the operation of the cage, and a third step for re-computing the speed pattern in accordance with the running distance computed in the second step.

Inventors

KOH EUN MAN

Latest standardized assignees - inventors removed

LG OTIS ELEVATOR

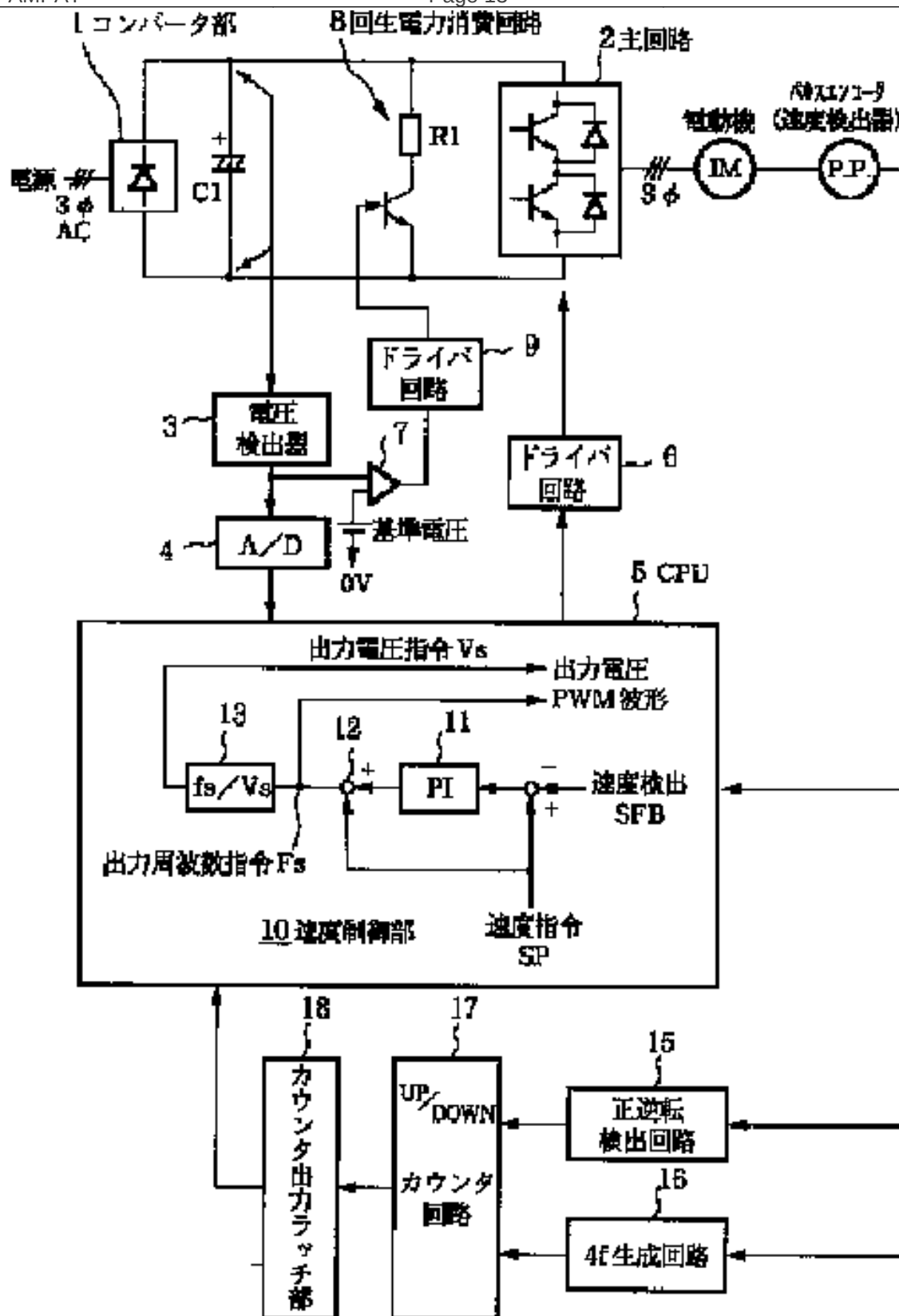
Family 9/22 - FAMPAT - ©Questel

Title

(JP08133616)

Elevator position control method and device therefor

Images



Publication data including kind & date

JPH08133616

A 1996-05-28

JP08133616

JP3479357

B2 2003-12-15

JP3479357



Abstract

(JP3479357)

PURPOSE: To dispense with a car passage detector by using a pulse **encoder** as a speed detector, discriminating the rotating direction of a driving motor from the output pulse of the pulse **encoder**, and obtaining an elevator deceleration start point to change a speed command from the count value of an up-down counter. CONSTITUTION: When a motor IM is driven by the output of a main circuit 2, the normal/reverse rotation of the motor IM is detected by a normal/reverse rotation detecting circuit 15 from the code pulse of a pulse **encoder** PP, and the counting direction of an up-down counter circuit 17

is switched up or down. Quadruple frequency generated from the speed pulse of the pulse **encoder** PP by a quadruple frequency generating circuit 16 is counted by the up-down counter circuit 17, and the count value is latched by a latch part 18 every speed control cycle. On the basis of this count value, a CPU 5 computes the present position of a car, and when the car is detected to have passed a deceleration start point, the deceleration pattern of a speed command SP is generated.

Inventors

DOI KAZUHIKO

YAMADA KOJI

Latest standardized assignees - inventors removed

OTIS ELEVATOR

MEIDENSHA ELECTRIC MANUFACTURING

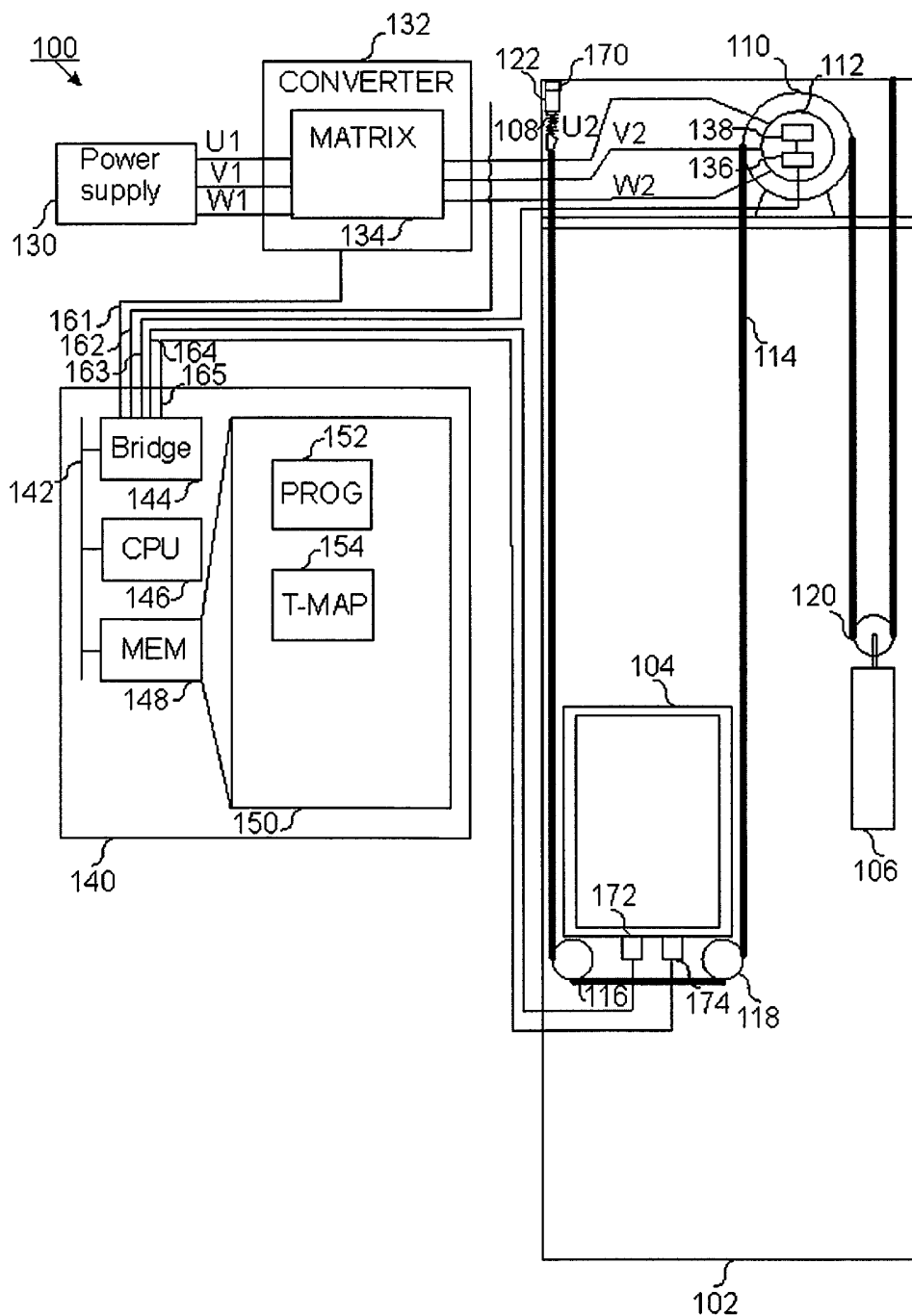
Family 10/22 - FAMPAT - ©Questel

Title

(EP3072843)

A method and apparatus for automatic elevator drive configuration

Images



Publication data including kind & date

EP2923986	A1	2015-09-30	EP2923986
WO2015144989	A1	2015-10-01	WO2015144989
EP2945281	A1	2015-11-18	EP2945281
EP3072843	A1	2016-09-28	EP3072843
EP2923986	B1	2016-10-19	EP2923986
EP2945281	B1	2016-11-30	EP2945281
US2017008730	A1	2017-01-12	US2017008730
CN106470928	A	2017-03-01	CN106470928
ES2614737	T3	2017-06-01	ES2614737



Abstract

(EP3072843)

The invention relates to a method for manufacturing and installing a motor of a traction elevator. In the method there is

determining a plurality of parameters of an electrical motor during a testing of the motor. The plurality of parameters of the motor determined are stored to a memory. The memory is installed to the electrical. The motor is installed in the elevator. A communication channel is connected between a drive unit and the memory comprising the plurality of motor parameters. The elevator and the drive unit are powered on. The drive unit determines a plurality of elevator parameters required in driving the elevator correctly using the plurality of parameters of the motor.

Inventors

KATTAINEN ARI

LAAKSONHEIMO JYRKI

Latest standardized assignees - inventors removed

KONE

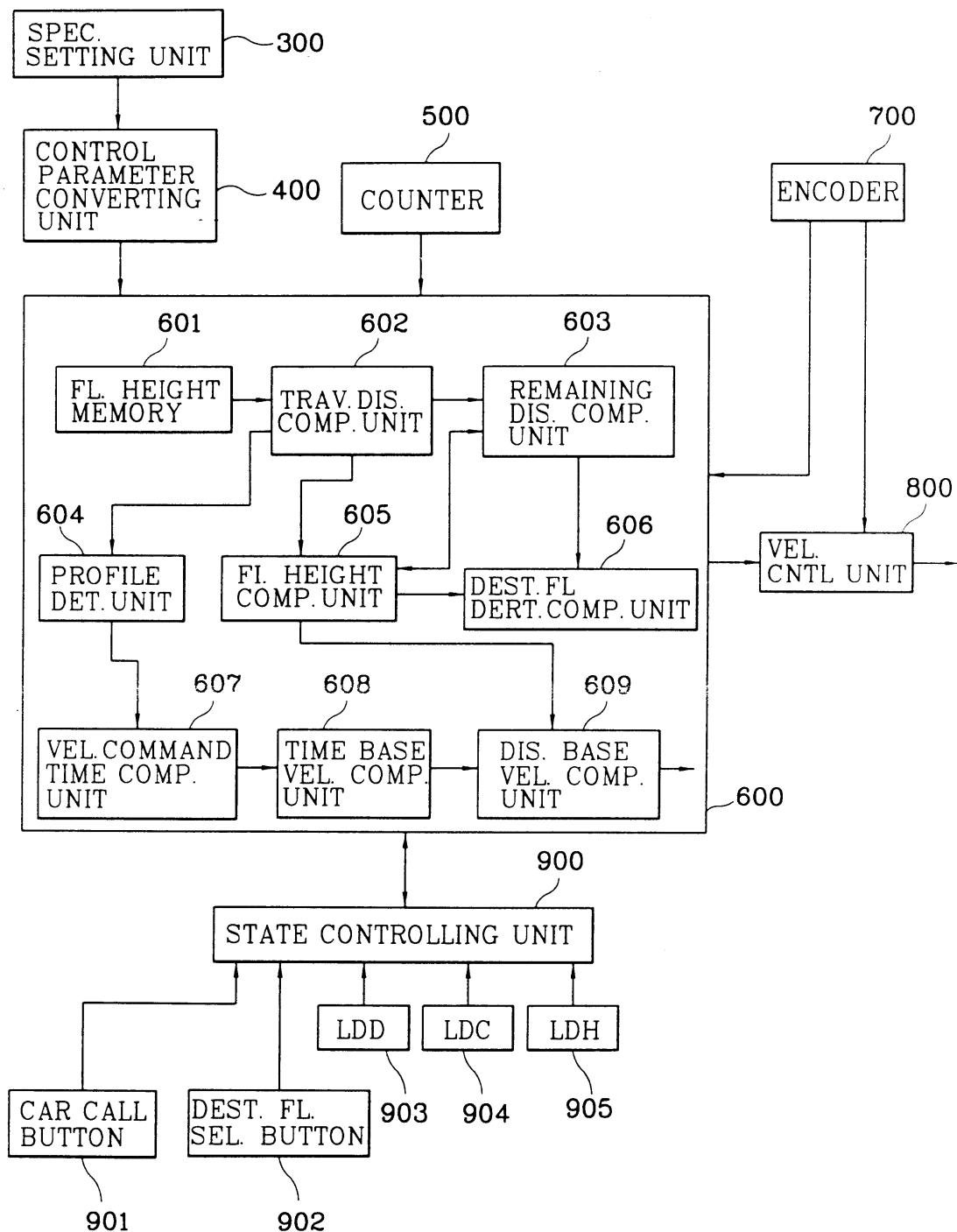
Family 11/22 - FAMPAT - ©Questel

Title

(US6311802)

Velocity instruction generation apparatus for car of elevator system and velocity control method thereof

Images



Publication data including kind & date

CN1246435	A	2000-03-08	CN1246435
KR20000015381	A	2000-03-15	KR20000015381
JP2000159451	A	2000-06-13	JP2000159451
US6311802	B1	2001-11-06	US6311802
KR100312768	B1	2002-05-09	KR100312768
CN1205105	C	2005-06-08	CN1205105C



Abstract

(US6311802)

A velocity instruction generating apparatus for a car of an elevator system and a velocity instruction generating method which make it possible to decrease a computation time, computation amount and computation error by computing a velocity instruction based on an integer number computation and control the velocity of the car in real time.

Inventors

SG93783

A1 2003-01-21 SG--93783

Abstract

(EP-641735)

A semi-active secondary suspension comprises a relatively large actuator (230) for handling low-frequency forces such as those caused by uneven passenger distribution, etc., by means, for example, of a position control loop. A pair of such suspensions on opposite sides of the car or rail can be made to act in concert, for example, by actuating only one at a time. An inner loop can be added to the position control for each secondary suspension to restore its actuator to a selected preload position when not being used as an actuator. The semi-active secondary suspension is made fully active by adding a relatively small actuator (120) for handling higher frequency dynamic forces. A roller guide embodiment has rollers (100) pivotally mounted on links which are spring-biased toward the rail blades. The relatively large actuators (230) are connected to the link springs (232) to slowly increase or decrease the preload force on the spring (232) acting on the links (102b) to counter low frequency disturbances. The relatively small actuators (120) also act on the links (102b) to ensure that high frequency disturbances are quickly countered thereby ensuring a substantially vibration-free ride. Suspensions comprising slide guides, electromagnets, etc. are shown. <IMAGE>

Inventors

SKALSKI CLEMENT A

TRAKTOVENKO BORIS G

Latest standardized assignees - inventors removed

OTIS ELEVATOR

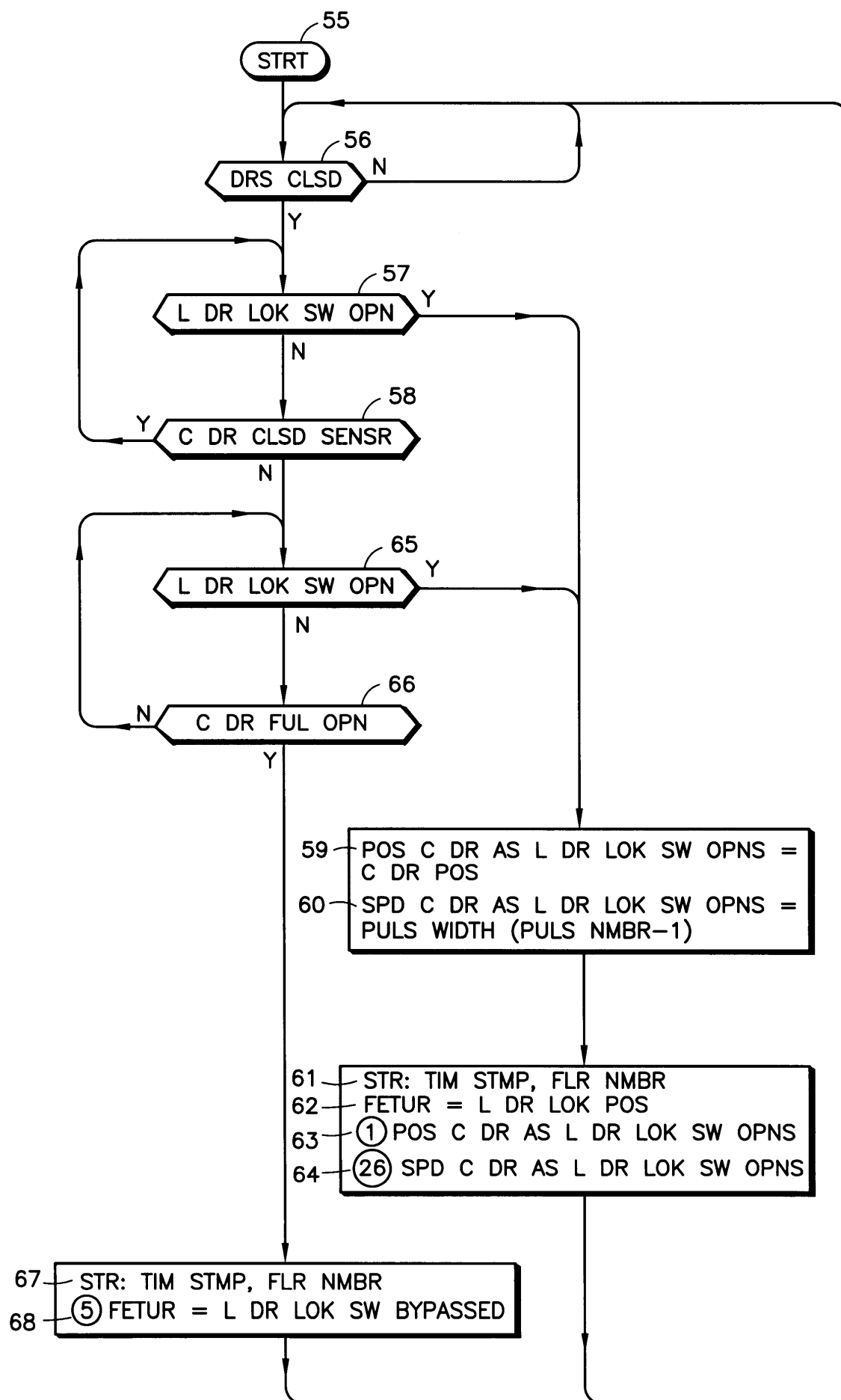
Family 13/22 - FAMPAT - ©Questel

Title

(US6516923)

Elevator auditing and maintenance

Images



[JP2003048679](#)

A 2003-02-21 JP2003048679

[JP4121789](#)

B2 2008-07-23 JP4121789

**Abstract**

(US6516923)

Information including normal and abnormal operating conditions and events, occurring during the operation of an elevator car door and landing doors, is monitored and recorded (FIGS. 1-25), compared and combined with other information and with thresholds to detect notable events and conditions and generate corresponding maintenance recommendation messages, in response to which maintenance operations are performed. The maintenance messages include adjusting or cleaning: the car door vane (C), the landing door lock at a given floor (D, E), the car door closed switch (F), the car door track or the car door sill (M), a landing door track or landing door sill (N), the car door drive belt (O), the elevator car door motor or the related door controller mechanism (R), and car guide rails (YY); adjusting or replacing the door position **encoder** (DD), the between-door safety device (GG), door open and close buttons, landing call and car call buttons (LL) and lights (SS), and the car rail guides (WW).

Inventors

LENCE BARREIRO JUAN A

MOON CHOUHWAN

Latest standardized assignees - inventors removed

OTIS ELEVATOR

Family 14/22 - FAMPAT - ©Questel

Title

(WO201562280)

Elevator monitoring device

Images

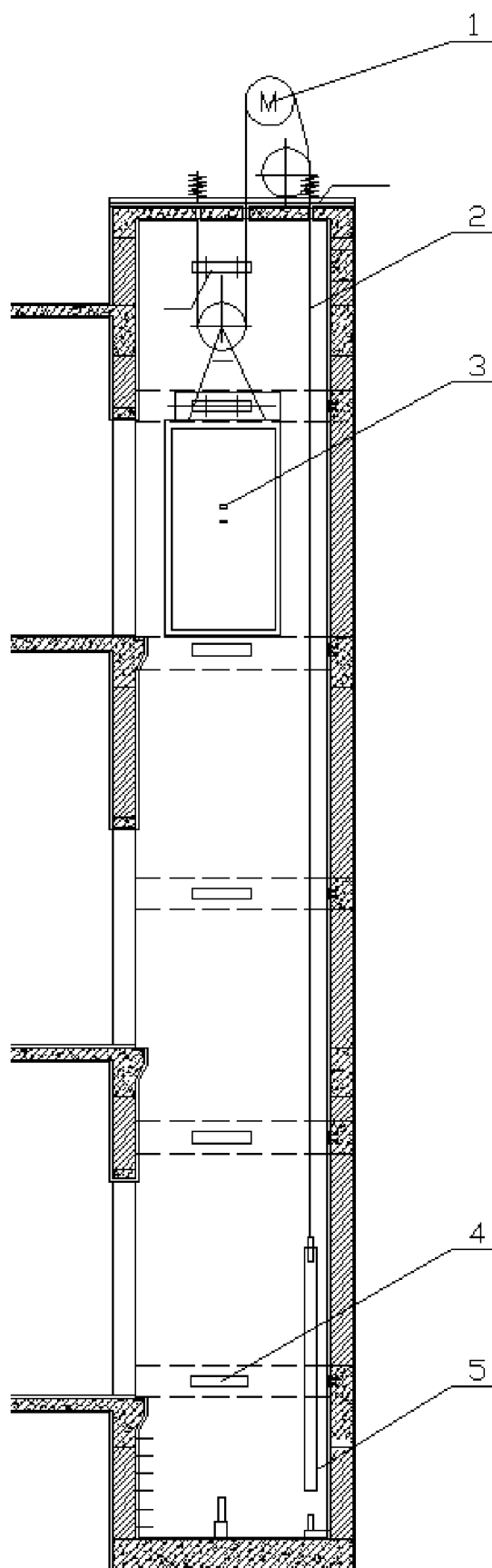


图 1 /Fig 1

Publication data including kind & date

CN103538982	A	2014-01-29	CN103538982
WO2015062280	A1	2015-05-07	WO201562280
DE202014010508	U1	2015-12-10	DE202014010508
CN103538982	B	2016-02-24	CN103538982B

**Abstract**

(WO201562280)

An elevator monitoring device. A tachometer wheel with an **encoder** is connected to an output shaft of a main motor; the **encoder** transmits a motor rotation signal to a PG card, and outputs same to an elevator control board after processing same; the elevator control board converts the signal which has been processed by way of combining a time parameter into a speed v_1 , and transmits same to an in-car display panel by means of CAN bus communications; an optical detection module (3) is also provided, which can acquire a car displacement parameter s , and calculates a real-time speed v_2 of the elevator via a time parameter t of the crystal oscillation of a single chip microcomputer; and the elevator control board compares same with the speed v_1 , and if the difference is within an acceptable range, it is validated that the **encoder** is operating effectively. By means of dual-mode signal collection, the failure of the **encoder** can be prevented, thereby ensuring the reliability for monitoring the operation state of the elevator.

Inventors

GUO BAOZHONG

SONG AIFENG

Latest standardized assignees - inventors removed

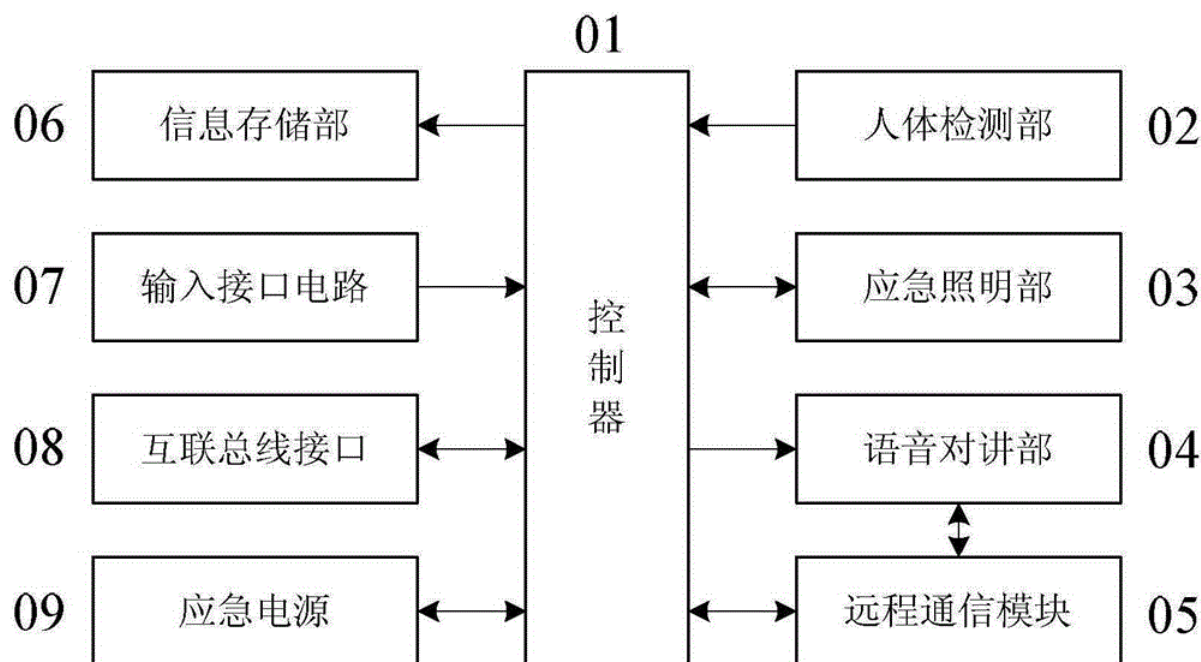
SUZHOU DEAO ELEVATOR

Family 15/22 - FAMPAT - ©Questel

Title

(CN103693521)

Intelligent elevator accident long-distance emergency three-in-one unit and control method

Images**Publication data including kind & date**

CN103693521	A	2014-04-02	CN103693521
CN103693521	B	2016-06-08	CN103693521B

**Abstract**

(CN103693521B)

The invention discloses an intelligent elevator accident long-distance emergency three-in-one unit and a control method. The unit comprises a controller, a human body detection part, an emergency lighting part, a voice intercom part, a long-distance communication module, an information memory part, an input interface circuit, an interconnection bus interface, an emergency power supply and a shell, wherein the controller is the control core of the device, is respectively connected with the human body detection part, the emergency lighting part, the voice intercom part, the long-distance communication module, the information memory part, the input interface circuit, the interconnection bus interface and the emergency power supply. The intelligent elevator accident long-distance emergency three-in-one unit and the control method can intelligently finish the function of faulted call when an elevator is in fault, and play a decisive role in further rescuing and pacifying trapped passengers, thereby being an indispensable important constituent part of an elevator fault long-range automatic alarm system.

Inventors

WANG ZIXI

Latest standardized assignees - inventors removed

TIANJIN AMJOY TECHNOLOGY

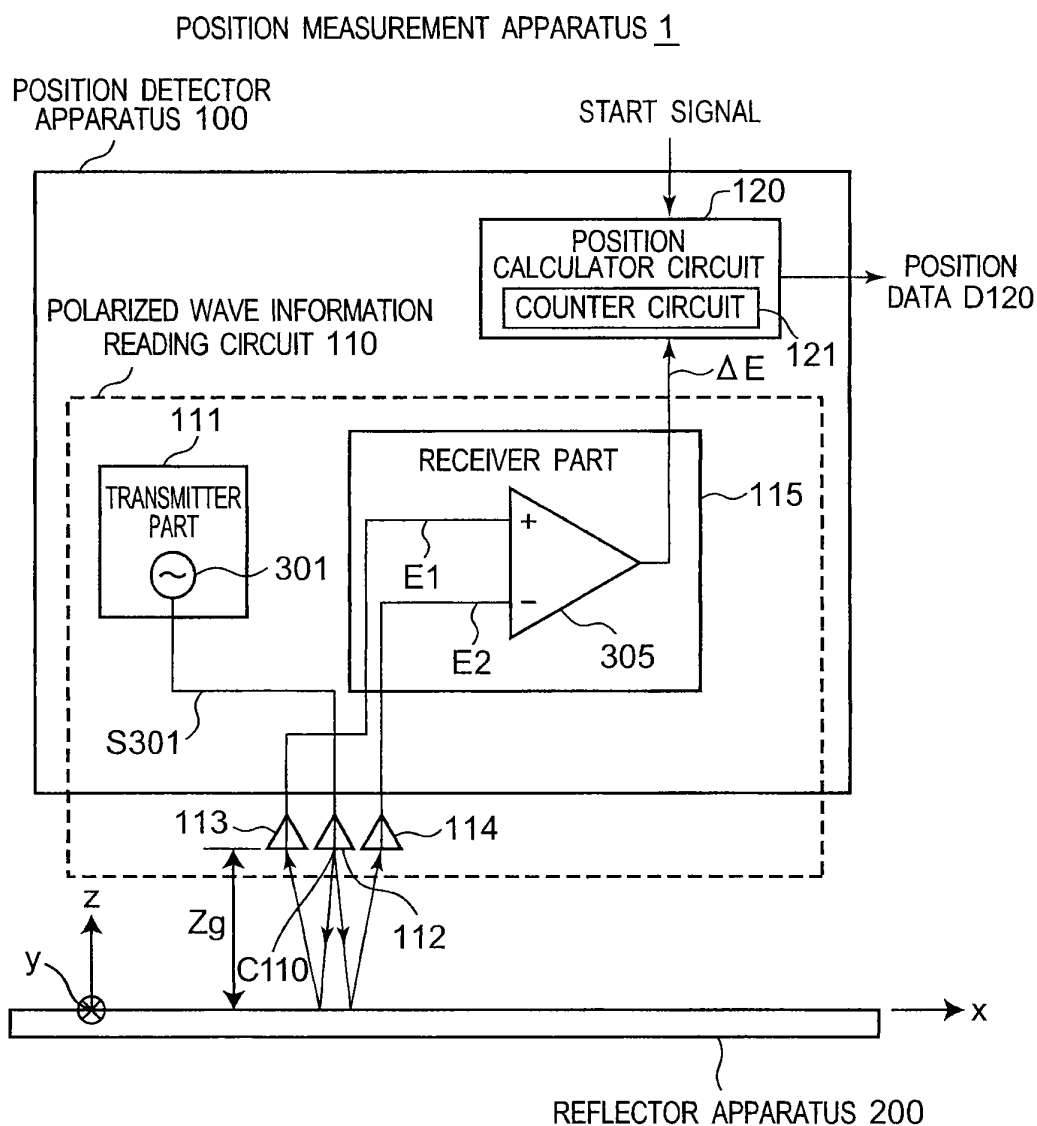
Family 16/22 - FAMPAT - ©Questel

Title

(WO2012143988)

Position measuring apparatus

Images

**Publication data including kind & date**

WO2012143988	A1	2012-10-26	WO2012143988
US2014036265	A1	2014-02-06	US20140036265
IN6161/CHENP/2013	A	2014-07-18	IN2013CN06161
JPWO2012143988	A1	2014-07-28	JP2012143988W
JP5615428	B2	2014-10-29	JP5615428
US9488500	B2	2016-11-08	US9488500

**Abstract**

(WO2012143988)

A reflecting apparatus (200) is provided with reflectors, which respectively radiate reflected waves in predetermined polarization directions. A polarization information readout circuit (110) fixed to a moving body radiates radio waves toward the reflecting apparatus (200) from a transmitting antenna (113), receives the reflected waves from the reflecting apparatus (200), and generates reception level difference signals (ΔE) that correspond to the polarization direction of the received reflected waves. A position calculating circuit (120) calculates the position of the polarization information readout circuit (110) on the basis of the reception level difference signals (ΔE).

Inventors

TSUJITA WATARU

INOMATA KENJI

WATANABE MASAHIRO

SHIKAI MASAHIRO

Latest standardized assignees - inventors removed

MITSUBISHI ELECTRIC

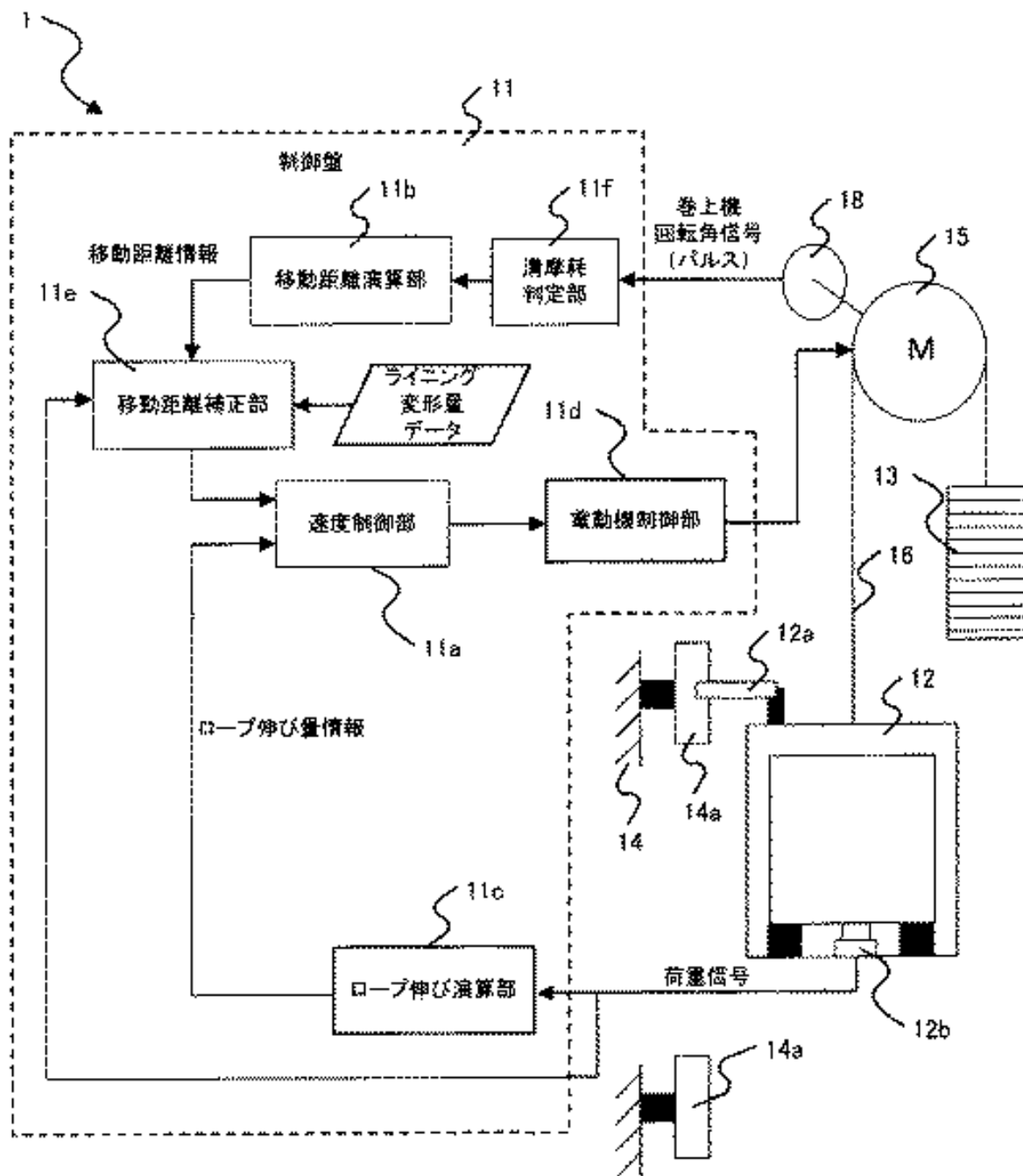
Family 17/22 - FAMPAT - ©Questel

Title

(JP2012025556)

Elevator

Images



Publication data including kind & date

CN102344060

A

2012-02-08

CN102344060

JP2012025556

A

2012-02-09

JP2012025556



Abstract

(JP2012025556)

PROBLEM TO BE SOLVED: To provide an elevator which can surely and correctly make an elevator car arrive at a destination floor even when a lining material is degraded in a traction sheave groove or the like.**SOLUTION:** A control panel for controlling the ascent and descent of the elevator car includes: a movement distance calculation part in which a pulse output from a hoisting machine is converted on the basis of a prescribed pulse rate and from which the movement distance information of the elevator car is output; a movement distance correction part in which a diameter of a traction sheave, around which a main rope is wound, is estimated on the basis of movable loads and lining deformation quantity data, which are related beforehand to pulses of a position detector and show the compressed quantities of wear-resistant members, and the output movement distance information of the elevator car is corrected; a speed control part for outputting a speed control signal of the elevator car on the basis of the corrected movement distance information; and an electric motor control part for controlling the drive of the hoisting machine on the basis of the output speed control signal.

Inventors

OSADA AKIRA

SHIMIZU MAI

Latest standardized assignees - inventors removed

TOSHIBA ELEVATOR

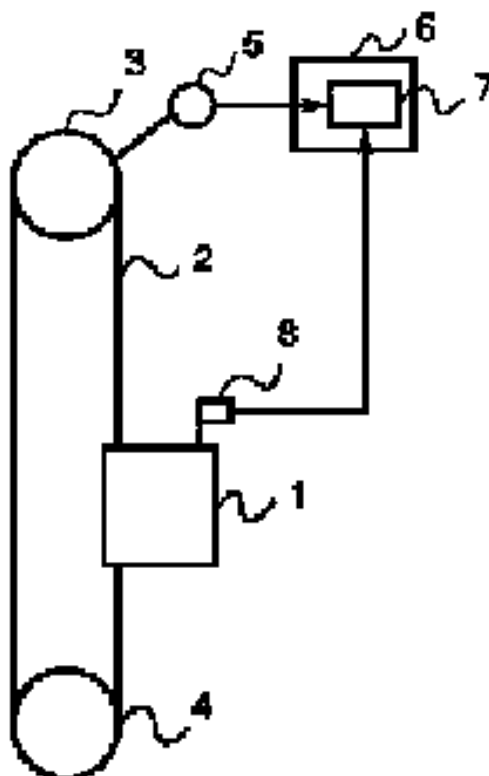
Family 18/22 - FAMPAT - ©Questel

Title

(JP09012245)

Elevator position detection device

Images

**Publication data including kind & date**[JPH0912245](#)

A

1997-01-14

JP09012245

**Abstract**

(JP09012245)

PURPOSE: To improve detection precision of a positional data during travelling and to reduce a flooring error by correcting a positional detection error due to expansion and contraction of a speed governor rope in accordance with a driving state of an elevator. **CONSTITUTION:** Expansion and contraction quantity of a speed governor rope is computed from an absolute position detector 8 set on a passenger cage 1, acceleration of an elevator and cage position in a position detector by a rotary **encoder** 5 set on a speed governor pulley 2.

Inventors

OKI SHIGERU

MITSUNE SHUNSUKE

Latest standardized assignees - inventors removed

HITACHI

HITACHI MITO ENGINEERING

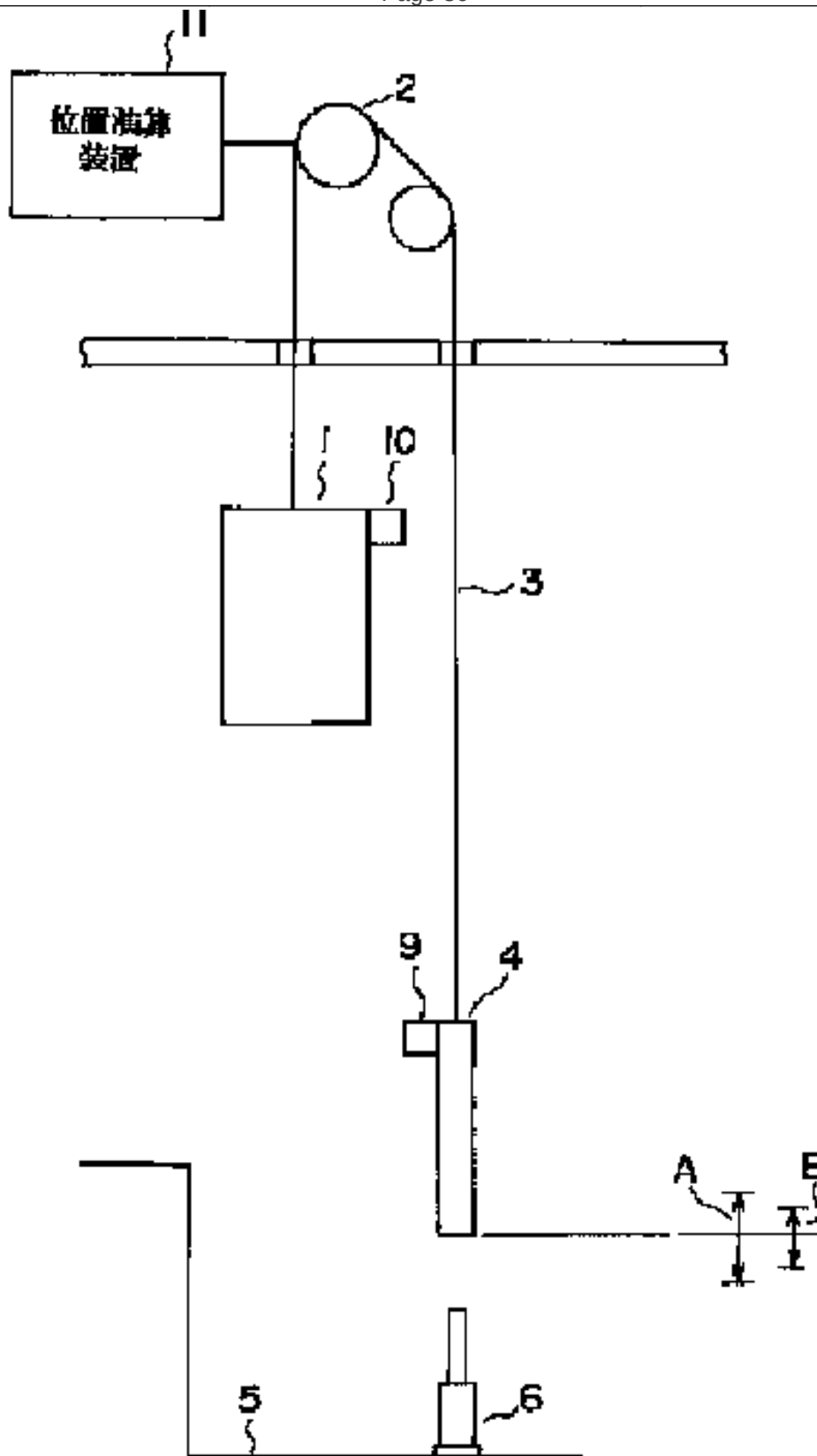
Family 19/22 - FAMPAT - ©Questel

Title

(JP08053274)

Position inspection device for balance weight

Images



Publication data including kind & date

JPH0853274

A 1996-02-27 JP08053274



Abstract

(JP08053274)

PURPOSE: To improve services for a user and shorten a work time by eliminating the need of stopping an elevator and entering a pit at the time of inspection. **CONSTITUTION:** When an elevator ascends from a reference floor near the lowest floor, a detector 10 detects a detection piece 9 fitted to a balance weight 4 at a position near an intermediate floor. Also, a position operation device 11 always knows the position of an elevator car, according to pulse signals from an **encoder** and, therefore, can find a car travel distance from the ascent start position of a car 1 to the level where the piece 9 is detected. In this case, the distance varies, due to the elongation and contraction of a main rope 3. On the contrary, therefore, the

elongation and contraction of the rope 3 can be found from the variation of the distance, and the device 11 can find the position of the weight 4. When the position of the weight 4 is abnormal, an output device reports the error of the weight 4 by means of a sound, light or the like.

Inventors

TAKAGI KATSUSHI

Latest standardized assignees - inventors removed

MITSUBISHI ELECTRIC

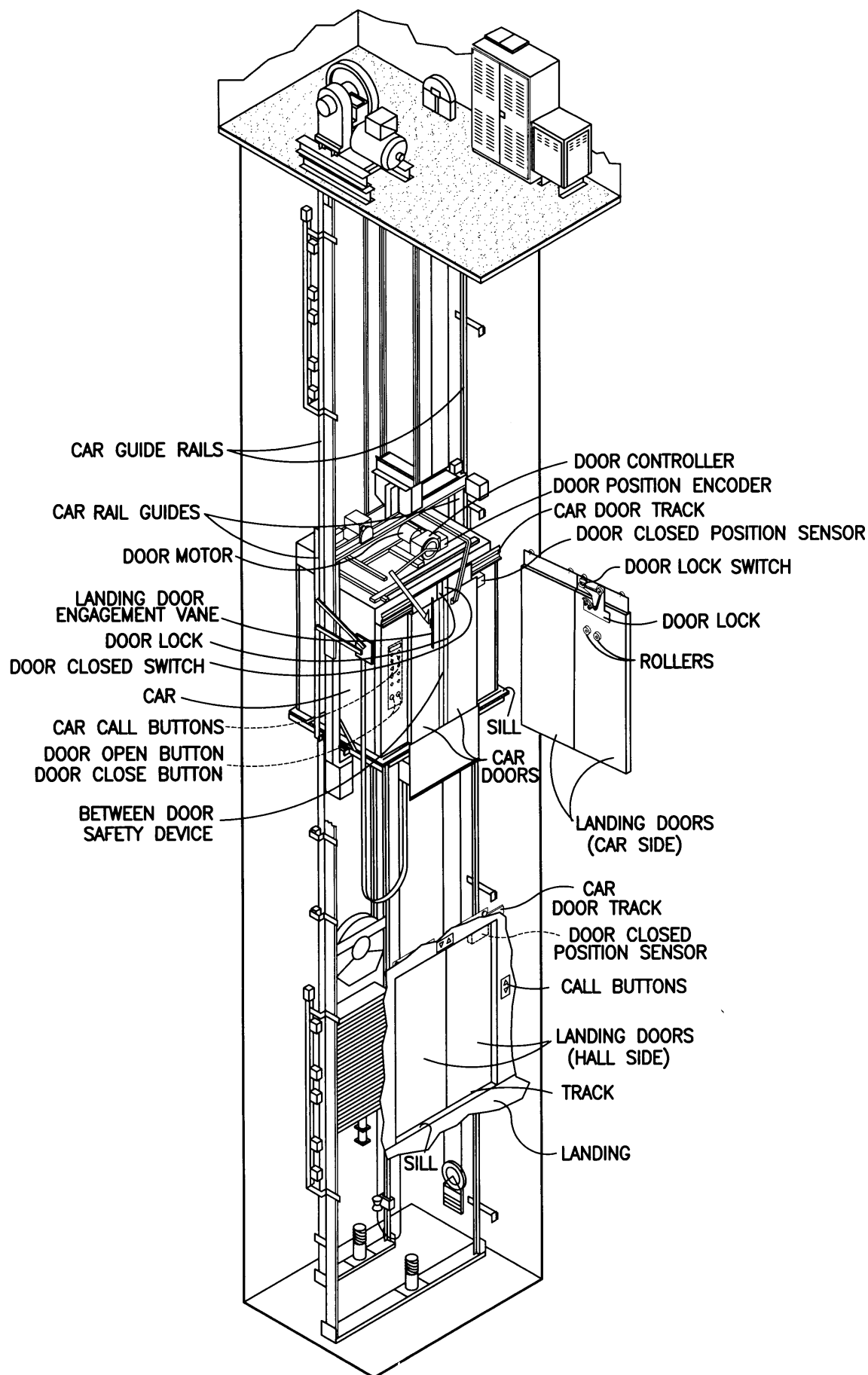
Family 20/22 - FAMPAT - ©Questel

Title

(US6543583)

Elevator auditing with recommended action, reason and severity in maintenance messages

Images



Publication data including kind & date

JP2003048680	A	2003-02-21	JP2003048680
US6543583	B1	2003-04-08	US6543583
JP4105488	B2	2008-06-25	JP4105488



Abstract

(US6543583)

Information including normal and abnormal operating conditions and events, resulting from operation of elevator car and landing doors, is monitored and recorded (FIGS. 1-28), compared and combined with other information and with thresholds to detect notable events and conditions and generate corresponding messages including a reason for the message, severity of the related event or condition, and optionally, a general maintenance recommendation. The maintenance messages include adjusting or cleaning: car door vane (A-D), landing door lock at a given floor (E-L), car door closed switch (M-R), car door track or sill (S-Y), landing door track or sill (Z-EE), door drive belt (FF, GG), elevator car door motor or door controller mechanism (HH-MM), and car guide rails (FFF); and include adjusting or replacing: door position **encoder** (NN, OO), between-door safety device (PP-SS), door open/close buttons (TT-XX), landing and car call buttons (YY-AAA) and lights (BBB, CCC), and car rail guides (DDD, EEE).

Inventors

LENCE BARREIRO JUAN A

MOON CHOUHWAN

Latest standardized assignees - inventors removed

OTIS ELEVATOR

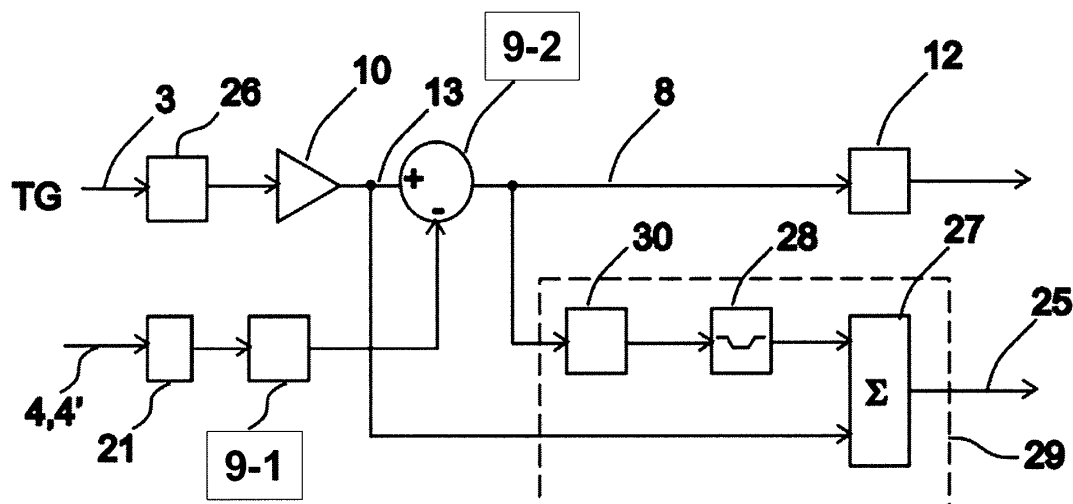
Family 21/22 - FAMPAT - ©Questel

Title

(EP2281334)

Determination of the movement of a synchronous machine

Images



Publication data including kind & date

FI20080387	A0	2008-05-30	FI200800387
FI20080387	A	2009-12-01	FI200800387
WO2009144362	A1	2009-12-03	WO2009144362
FI120992	B	2010-05-31	FI-120992
EP2281334	A1	2011-02-09	EP2281334
CN102047551	A	2011-05-04	CN102047551
US2011108369	A1	2011-05-12	US20110108369
CN102047551	B	2014-09-17	CN102047551B



[EP2281334](#)

A4 2015-10-28 EP2281334

[US9758342](#)

B2 2017-09-12 US9758342

**Abstract**

(EP2281334)

The invention relates to a method and an apparatus for determining the movement of a synchronous machine (1).The apparatus for determining the movement of a synchronous machine comprises a determination for at least one electrical magnitude (4,4') of the synchronous machine; a determination (9) of the position error of the rotor of the synchronous machine, which is fitted to determine the position error (8) of the rotor on the basis of the aforementioned at least one electrical magnitude (4) of the synchronous machine; and also a correction (10) of the movement signal of the incremental sensor, which is fitted to correct the read movement signal (3) of the incremental sensor on the basis of the aforementioned determination (9) of the position error of the rotor of the synchronous machine.

Inventors

STOLT LAURI

KAUPPINEN TUUKKA

Latest standardized assignees - inventors removed

KONE

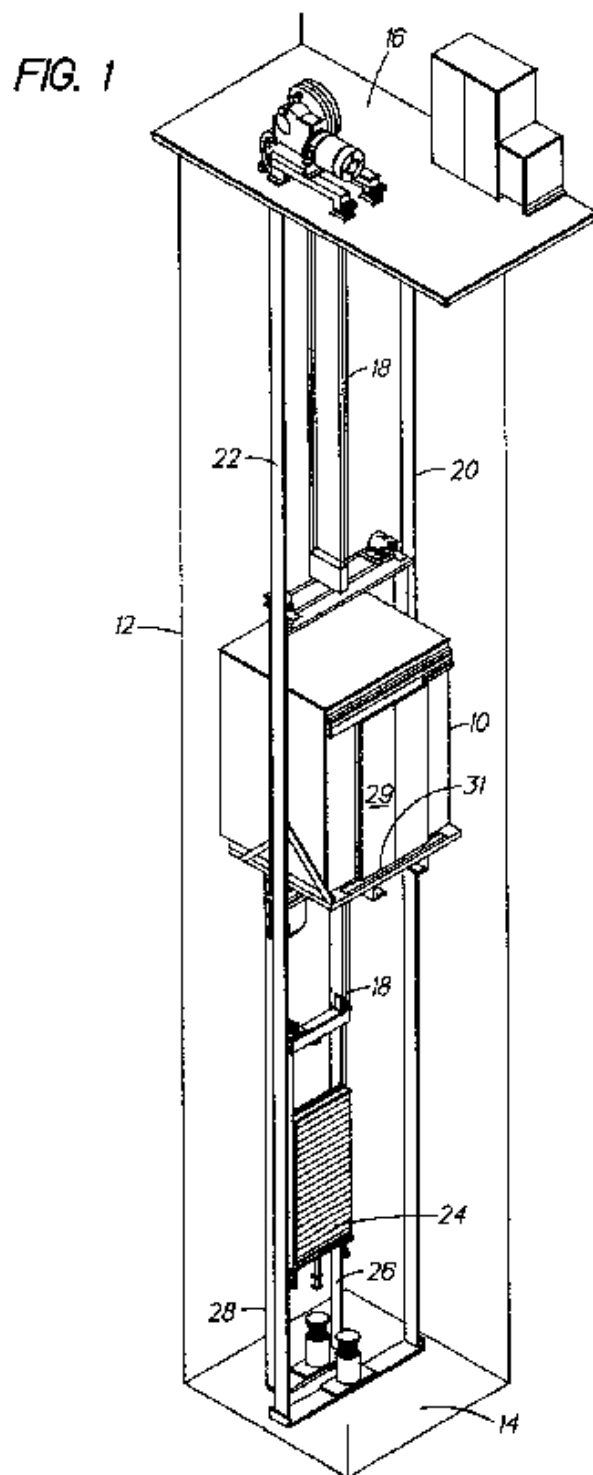
Family 22/22 - FAMPAT - ©Questel

Title

(EP-905080)

Rail survey unit

Images



Publication data including kind & date

EP0905080	A2	1999-03-31	EP-905080
AU8309298	A	1999-04-15	AU9883092
CN1218176	A	1999-06-02	CN1218176
JPH11160062	A	1999-06-18	JP11160062
US5931264	A	1999-08-03	US5931264
EP0905080	A3	2001-05-30	EP-905080
AU734269	B2	2001-06-07	AU-734269
CN1130547	C	2003-12-10	CN1130547C



Abstract

(EP-905080)

A rail survey unit (130) measures the relative profile of an elevator guide rail (132) at a series of equally spaced points along the rail (132). A first support bearing assembly (134) and second support bearing assembly (136) maintain a constant spacing between the rail and the unit at two points along its length, and the distance between the unit and the rail at a third point is measured by orthogonal position sensors (160,162). An **encoder** (164) measures the distance travelled along the rail, and measurements are taken at the equally spaced points. The distances between the bearing assemblies (134,136) and sensors (160,162) are integral multiples of the spacing of the equally spaced points. <IMAGE>

Inventors

GILLINGHAM GEOFFREY W

GRIFFITHS FRANCIS J

REMMERS TIMOTHY M

Latest standardized assignees - inventors removed

OTIS ELEVATOR